

CLAIMS

## What Is Claimed:

5 1. An ejector for ejecting molded articles from a mold without liquid lubrication, the ejector comprising:

an elongated, steel shank having an article-engaging end and a head end; and

a substantially uniform pre-coating of metal having a thickness of

10 between about 0.00004 to about 0.00007 inch over the steel shank applied prior to cutting of the article-engaging end of the shank to shorten the shank to a desired length and deburring of the peripheral edge of the cut shank and, said metal pre-coating selected from the group consisting of nickel or alloys of nickel, the pre-coating remaining substantially intact at the peripheral edge of

15 the cut shank end and providing low friction reciprocal sliding of the shank within the mold after said cutting and deburring.

20 2. An ejector in accordance with Claim 1 in which the metal pre-coating has a thickness in the range of approximately 0.00004 inch to 0.0001 inch.

3. An ejector in accordance with Claim 1 in which the metal pre-coating has a thickness of approximately 0.00005 inch.

25 4. A dry ejector in accordance with Claim 1 in which the metal pre-coating is an alloy including nickel, phosphorus and polytetrafluoroethylene.

5. A dry ejector in accordance with Claim 1 wherein the dry ejector is an ejector sleeve and the metal pre-coating is an alloy including nickel, phosphorus and polytetrafluoroethylene.

6        A dry ejector in accordance with Claim 1 wherein the dry ejector is an ejector sleeve and the metal pre-coating is an alloy including 80-83% by weight nickel, 1-11% by weight phosphorus and 8-9 by weight polytetrafluoroethylene.

5        7.        A dry ejector in accordance with Claim 1 wherein the dry ejector is an ejector pin and the metal pre-coating is an alloy including nickel and cobalt.

10        8.        A dry ejector in accordance with Claim 1 wherein the dry ejector is an ejector pin and the metal pre-coating is an alloy including about 48% by weight cobalt and balance nickel.

15        9.        A dry ejector in accordance with Claim 1 wherein the dry ejector is an ejector blade and the metal pre-coating is an alloy including nickel and cobalt.

15        10.      In a mold for molding plastic articles lubricant-free a combination comprising:  
                  an upper mold portion;  
                  a lower mold portion;  
                  said upper and lower mold portions forming an article-defining cavity therebetween when brought together;  
20        one of said upper and lower mold portions having an ejector-receiving bore in communication with said article-defining cavity;  
                  an ejector having an article-engaging end and a head end being disposed in the bore for reciprocal movement of the ejector between an extended position in which the article-engaging end extends into the article-defining cavity to eject molded plastic articles and a retracted position in which the article-engaging end of the ejector is disposed outwardly of the article-defining cavity; and  
25        said ejector having a substantially uniform, lubricious pre-coating of a material selected from the group consisting of nickel or alloys of nickel with a thickness of less than approximately 0.00001 inch applied prior to cutting of the article-engaging end of the ejector to shorten the ejector to a desired length and deburring of the peripheral edge of said ejector through the cutting and

30

deburring to provide dry lubrication of the ejector for low friction reciprocal movement of the ejector within the bore between said extended and retracted positions.

5 11. The combination in accordance with Claim 10 in which the thickness selected for the lubricious pre-coating facilitates cutting of the article-engaging end of the ejector and deburring of the cut end with the coating remaining substantially intact at the cut and deburred end of the ejector.